

Design and Technology - Progression in Skills

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Developing, planning and communicating ideas	<ul style="list-style-type: none"> constructs with a purpose in mind, using a variety of resources 	<ul style="list-style-type: none"> understand the development of existing products suggest ideas and explain what they are going to do understand how to identify a target group make a product based on a design criteria develop ideas through talk and drawings make templates and mock ups of their ideas in card and paper or using ICT 	<ul style="list-style-type: none"> generate ideas by drawing on their own and other people's experiences develop design ideas through discussion, observation, drawing and modelling identify a purpose for what they intend to design and make identify a target group for what they intend to design and make based on a design criteria. develop ideas through talk and drawings and label parts. make templates and mock ups of 	<ul style="list-style-type: none"> generate ideas for an item, considering its purpose and the user/s. order the main stages of making a product identify a purpose and establish criteria for a successful product understand how well products have been designed, made, what materials have been used and the construction technique learn about inventors, designers, engineers, chefs and manufacturers who have developed ground- 	<ul style="list-style-type: none"> generate ideas, considering the purposes for which they are designing- link with Mathematics and Science make labelled drawings from different views showing specific features develop a clear idea of what has to be done, planning how to use materials, equipment and processes suggest alternative methods of making, if the first attempts fail identify the strengths and areas for development in their ideas 	<ul style="list-style-type: none"> generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose apply a range of finishing techniques, including those from art and design draw up a specification for their design- link with 	<ul style="list-style-type: none"> generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose accurately apply a range of finishing techniques, including those from art and design draw up a specification for their design- link

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			ideas	<p>breaking products</p> <ul style="list-style-type: none"> • understand whether products can be recycled or reused. • Know to make drawings with labels when designing. • When planning explain their choice of materials and components including function and aesthetics. 	<p>and products.</p> <ul style="list-style-type: none"> • consider the views of others, including intended users, to improve their work. • learn about inventors, designers, engineers, chefs and manufacturers who have developed ground - breaking products. • explain their choice of materials and components according to function and aesthetic. 	<p>Mathematics and Science</p> <ul style="list-style-type: none"> • use results of investigations, information sources, including ICT when developing design ideas • select appropriate materials, tools and techniques • understand how much products cost to make, how sustainable and innovative they are and the impact products have beyond their intended purpose 	<p>with Mathematics and Science</p> <ul style="list-style-type: none"> • plan the order of their work, choosing appropriate materials, tools and techniques • suggest alternative methods of making if the first attempts fail • identify the strengths and areas for development in their ideas and products • know how much products cost to make, how sustainable and innovative they are and the impact products have beyond their intended purpose
Working with tools, equipment, materials and components to	<ul style="list-style-type: none"> • uses simple tools and techniques competently and 	<ul style="list-style-type: none"> • make designs using appropriate techniques 	<ul style="list-style-type: none"> • select tools and materials; use correct vocabulary to name and 	<ul style="list-style-type: none"> • select a wider range of tools and techniques for making their 	<ul style="list-style-type: none"> • select a wider range of tools and techniques for making their 	<ul style="list-style-type: none"> • select appropriate materials, tools and techniques 	<ul style="list-style-type: none"> • select appropriate tools, materials, components

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<p>make quality products</p>	<p>appropriately</p> <ul style="list-style-type: none"> selects tools and techniques needed to shape, assemble and join materials they are using 	<ul style="list-style-type: none"> build structures, exploring how they can be made stronger, stiffer and more stable explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products measure, mark out, cut and shape a range of materials explore using tools e.g. scissors and a hole punch safely assemble, join and combine materials and components together using a variety of temporary methods e.g. glues or masking tape use simple finishing techniques to 	<p>describe them</p> <ul style="list-style-type: none"> build structures, exploring how they can be made stronger, stiffer and more stable measure, cut and score with some accuracy. use hand tools safely and appropriately assemble, join and combine materials in order to make a product cut, shape and join fabric to make a simple product use basic sewing techniques choose and use appropriate finishing techniques based on own ideas 	<p>product i.e. construction materials and kits, textiles, food ingredients, mechanical components and electrical components.</p> <ul style="list-style-type: none"> explain their choice of tools and equipment in relation to the skills and techniques they will be using. understand that mechanical and electrical systems have an input, process and output understand that mechanical systems such as levers and linkages or pneumatic systems create movement know how simple electrical 	<p>product safely</p> <ul style="list-style-type: none"> know how to measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques join and combine materials and components accurately in temporary and permanent ways know how mechanical systems such as cams or pulleys or gears create movement understand how more complex electrical circuits and components can be used to create functional products. 	<p>e.g. cutting, shaping, joining and finishing, accurately</p> <ul style="list-style-type: none"> select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities understand how mechanical systems such as cams or pulleys or gears create movement know how more complex electrical circuits and components can be used to create functional products and how to program a computer to 	<p>and techniques and use them</p> <ul style="list-style-type: none"> use tools safely and accurately assemble components to make working models aim to make and to achieve a quality product pin, sew and stitch materials together to create a product make modifications as they go along construct products using permanent joining techniques understand how mechanical systems such as cams or
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		<p>improve the appearance of their product</p>		<p>circuits and components can be used to create functional products</p> <ul style="list-style-type: none"> • measure, mark out, cut, score and assemble components with more accuracy • work safely and accurately with a range of simple tools • think about their ideas as they make progress and be willing to change things if this helps them to improve their work • measure, tape or pin, cut and join fabric with some accuracy 	<ul style="list-style-type: none"> • learn how to program a computer to monitor changes in the environment and control their products • know how to reinforce and strengthen a 3D framework • sew using a range of different stitches, to weave and knit • measure, tape or pin, cut and join fabric with some accuracy • use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT 	<p>monitor changes in the environment and control their products</p> <ul style="list-style-type: none"> • understand that mechanical and electrical systems have an input, process and output. • measure and mark out more accurately • demonstrate how to use skills in using different tools and equipment safely and accurately with growing confidence cut and join with accuracy to ensure a good-quality finish to the product • weigh and measure accurately (time, dry ingredients, liquids) 	<p>pulleys or gears create movement</p> <ul style="list-style-type: none"> • know how more complex electrical circuits and components can be used to create functional products and how to program a computer to monitor changes in the environment and control their products • know how to reinforce and strengthen a 3D framework • understand that mechanical and electrical systems have an input, process and output • use finishing techniques to strengthen and improve the appearance of their product
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						<ul style="list-style-type: none"> use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT 	using a range of equipment including ICT
Evaluating processes and products	<ul style="list-style-type: none"> selects appropriate resources and adapts work where necessary 	<ul style="list-style-type: none"> evaluate their product by discussing how well it works in relation to the purpose (design criteria) explain what they like and dislike about products and why evaluate their products as they are developed, identifying strengths and possible changes they might make 	<ul style="list-style-type: none"> evaluate their work against their design criteria explain what they like and dislike about products and why evaluate their products as they are developed, identifying strengths and possible changes they might make talk about their ideas, saying what they like and dislike about them 	<ul style="list-style-type: none"> evaluate their product against original design criteria e.g. how well it meets its intended purpose disassemble and evaluate familiar products and consider the views of others to improve them evaluate the key designs of individuals in design and technology has helped shape the world 	<ul style="list-style-type: none"> evaluate their products carrying out appropriate tests evaluate their work both during and at the end of the assignment disassemble and evaluate familiar products and consider the views of others to improve them evaluate the key designs of individuals in design and technology has helped shape the world 	<ul style="list-style-type: none"> evaluate a product against the original design specification and by carrying out tests evaluate their work both during and at the end of the assignment evaluate it personally and seek evaluation from others evaluate the key designs of individuals in design and technology has helped shape the world 	<ul style="list-style-type: none"> evaluate their products, identifying strengths and areas for development, and carrying out appropriate tests evaluate their work both during and at the end of the assignment record their evaluations using drawings with labels evaluate against their original criteria and suggest ways that their product could be improved evaluate the

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							key designs of individuals in design and technology has helped shape the world
Food and Nutrition	<ul style="list-style-type: none"> eats a healthy range of food stuffs understands need for variety in food understanding of good practices with regards to eating can contribute to good health talks about ways to keep healthy 	<ul style="list-style-type: none"> understand that all food comes from plants or animals understand that food has to be farmed, grown elsewhere (e.g. home) or caught name and sort foods into the five groups in 'The Eat well plate' understand that everyone should eat at least five portions of fruit and vegetables every day know how to prepare simple dishes safely and hygienically, without using a heat source. Know how to 	<ul style="list-style-type: none"> understand that all food comes from plants or animals know that food has to be farmed, grown elsewhere (e.g. home) or caught name and sort foods into the five groups in 'The Eat well plate' know that everyone should eat at least five portions of fruit and vegetables every day prepare simple dishes safely and hygienically, without using a heat source use techniques 	<ul style="list-style-type: none"> know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source understand how to use a range of techniques such as peeling, chopping, 	<ul style="list-style-type: none"> know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source know how to use a range of techniques such as peeling, chopping, slicing, 	<ul style="list-style-type: none"> understand that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world understand that seasons may affect the food available understand how food is processed into ingredients that can be eaten or used in cooking know how to prepare and cook a variety of predominantly savoury dishes safely 	<ul style="list-style-type: none"> know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world understand that seasons may affect the food available understand how food is processed into ingredients that can be eaten or used in cooking know how to prepare and cook a variety of predominantly savoury dishes safely

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		use techniques such as cutting, peeling and grating	such as cutting, peeling and grating	<p>slicing, grating, mixing, spreading, kneading and baking</p> <ul style="list-style-type: none"> understand that a healthy diet is made up from a variety and balance of different food and drink, as depicted in 'The Eat well plate' know that to be active and healthy, food and drink are needed to provide energy for the body 	<p>grating, mixing, spreading, kneading and baking</p> <ul style="list-style-type: none"> know that a healthy diet is made up from a variety and balance of different food and drink, as depicted in 'The Eat well plate' know that to be active and healthy, food and drink are needed to provide energy for the body 	<p>and hygienically including, where appropriate, the use of a heat source</p> <ul style="list-style-type: none"> understand how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking understand that different food and drink contain different substances – nutrients, water and fibre – that are needed for health 	<p>and hygienically including, where appropriate, the use of a heat source</p> <ul style="list-style-type: none"> use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking know different food and drink contain different substances – nutrients, water and fibre – that are needed for health
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	EYFS	By the end of Year 2	By the end of Year 4	By the end of Year 6
IPC Design & Technology Skills	<p>ELGs: Exploring and using media and materials</p> <ul style="list-style-type: none"> Be able to safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function 	<ul style="list-style-type: none"> Be able to plan what they are going to make Be able to describe their plans in pictures and words Be able to use simple tools and materials to make products Be able to choose appropriate 	<ul style="list-style-type: none"> Be able to design and make products to meet specific needs Be able to make usable plans Be able to make and use labelled sketches as designs Be able to use simple tools and equipment with some 	<ul style="list-style-type: none"> Be able to respond to identified needs, wants and opportunities with informed designs and products Be able to gather and use information to suggest solutions to problems Be able to devise and use

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	<p>Being imaginative:</p> <ul style="list-style-type: none"> • Be able to use learning about media and materials in original ways, thinking about uses and purposes • Be able to represent their ideas, thoughts and feelings through design and technology, art, music, dance, role-play and stories 	<p>tools and materials for their tasks</p> <ul style="list-style-type: none"> • Be able to comment on their own plans and products and suggest areas of improvement • Be able to comment on the usefulness of products in everyday use 	<p>accuracy</p> <ul style="list-style-type: none"> • Be able to identify and implement improvements to their designs and products • Be able to identify the ways in which products in everyday use meet specific needs • Be able to suggest improvements to products in everyday use 	<p>step-by-step plans</p> <ul style="list-style-type: none"> • Be able to consider the needs of users when designing and making • Be able to select the most appropriate available tools and materials for a task • Be able to work with a variety of tools and materials with some accuracy • Be able to test and evaluate their own work and improve on it • Be able to investigate the way in which simple products in everyday use are designed and made and how they work • Be able to evaluate the effectiveness of simple products in everyday use
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